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AUTHOR Grosek, Robert J.
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ABSTRACT

The study involving 20 retarded adolescents and adults was designed to develop a rapid screening instrument predictive of a client's overall level of functioning. Using the Broome Functional Behavior Checklist, information was collected on each of the S's adaptive behaviors. The concept of using a subtest of items on a functional profile to make an inference about a client's general level of functioning appeared to be feasible from the data collected in the study. Tables with statistical data are appended as well as a copy of the Broome Functional Behavior Checklist Abbreviated Form. (SBH)

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Abbreviated Form of the Broome Functional Behavior Checklist

Robert J. Grosek

February, 1980

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ABSTRACT

When a client enters a treatment setting, often a decision will be rendered, based on the client's general level of functioning, to place the client into a classroom or other treatment setting. Although subsequent evaluations will identify the client's actual strengths and deficits, the clinician will want general information on the client in order to make that initial placement decision. In such instances a regular functional profile will provide more information than what the clinician requires in making his global impression of the client. This paper will discuss the development of a rapid screening instrument comprised solely of items that correlate highly with the client's overall level of functioning.

The value of measuring adaptive behavior in the mentally retarded is twofold. On one hand, such information is useful in identifying the extent to which an individual conforms to community standards of acceptable behavior. Functional behavior profiles are non-biased methods of assessing retarded clients' adaptive behavior (Coulter and Morrow, 1978, p. 115). These scales do not rely on the client's language ability or cooperation, and the scales may be standardized on any social, economic, or ethnic group. A second purpose for measuring adaptive behavior is to prescribe habilitative programming. Once a level of functioning is described, our understanding of the developmental process enables us to identify the next behavior to be trained. In this regard, measurement of adaptive behavior leads to habilitative planning (Coulter and Morrow, 1978, p. 38).

When the measurement of adaptive behavior is to be used in the first sense for identification and comparison, a less complete description of the client's behavior may be accepted by the clinician. In this instance, he does not want to know the client's exact proficiency in each behavioral domain. Instead, the clinician will use a global description of the client's level of functioning in making decisions about the client's suitability for general types of programs and treatment settings. This global impression may be summarized simply as the client's level of functioning such as mild, moderate, severe, or profound retardation.

There may be more items on current functional profiles than what is necessary to provide the therapist with this kind of a "global impression" of the client. Knowing that the client can or cannot use a telephone or write a letter most likely would not assist the therapist in placing the client into a program (profoundly, severely, and moderately retarded clients

are likely to score equally poorly on these two items). However, knowledge of his receptive language skills is often considered to be a good indice of an individual's habilitation potential. Thus it would appear that some items on a functional profile are more useful than others in giving the therapist a general impression of the client.

The purpose of this paper will be to develop a rapid screening instrument which will be predictive of a client's overall level of functioning. Those items on an established functional profile which correlate highly with the total outcome score will be identified and incorporated into an abbreviated functional profile. Both the original and the abbreviated checklists will be administered to a residential population of retarded individuals to determine how well their results compare with each other.

METHOD

Subject Selection - Twenty adolescent and adult clients were selected from a residential population at a developmental center in Upstate New York. The individuals ranged in age from 17 to 52 years and varied widely in adaptive, cognitive, and physical abilities.

Functional Scale - Information was collected on each of the client's adaptive behaviors. The Broome Functional Behavior Checklist (Grosek, 1979) was employed for this study. The checklist was derived from Grossman's (1977) guidelines for evaluating and diagnosing the adaptive behavior level of retarded individuals. This checklist addresses seven principle domains including self-help skills, physical skills, language, social skills, economic skills, occupational skills, and self-direction. Many of these domains are further divided into subcategories, and, where applicable, subcategory items are arranged into a hierarchy according

to ability. In all, the checklist contains one-hundred and twelve items. The total score for the individual can be translated into one of the four levels of retardation.

On each ward, the checklist was distributed to the direct-care staff who most frequently came in contact with the client. The staff were instructed in the use of the checklist and were asked to indicate simply if each skill was present or absent.

Analysis - The data was arranged according to two dimensions. The first dimension consisted of the 21 subcategories into which the checklist is naturally divided. The second dimension was the level of retardation as determined by the checklists' total score. Average scores were calculated for each cell as presented in Table I.

In each subcategory, going from profound to mild retardation, the difference in adjacent scores was calculated and the direction (increasing or decreasing) of the difference was noted. For three subcategories there was a strictly increasing difference between adjacent retardation levels, and that difference increased by a minimum of 15% in each case. These subcategories were dressing, miscellaneous physical skills, and receptive language. Thus, for these three subcategories, the average scores between retardation levels increased in a manner similar to the total scores.

The scores from these three subcategories were summed for each client and in turn were correlated with the total checklist score (Table II). Using this information, a prediction formula was calculated to estimate a total checklist score based on the data collected from only the three subcategory scores. The formula is:

$$Y = 17.98 + 5.03X$$

where Y is the estimated total score and X is the summed score for the subcategory items of dressing, physical skills, and receptive language.

Testing the Formula - The Broome Functional Behavior Checklist was administered to an additional twenty-four clients whose adaptive, cognitive, and physical skills were similar to the first group described above. The subcategory scores for dressing, miscellaneous physical skills, and receptive language were totaled, and, by using the prediction formula, these scores were used to estimate total checklist scores. The estimated total scores and the actual total scores were then compared (Table III).

RESULTS

The correlation between the estimated total scores and the actual total scores for the second group of subjects was .90. For both sets of data, the cutoff scores (0 - 66 profound, 67 - 86 severe, 87 - 101 moderate, 102 - 112 mild) were used to determine the level of retardation. The results are presented in Table IV.

Here the distribution of clients by retardation level as determined by the two sets of scores are similar to one another. The Chi Square analysis does not indicate a significant difference between the distribution of clients among the retardation levels.

DISCUSSION

The concept of using a subset of items on a functional profile to make an inference about a client's general level of functioning appears to be feasible from the data collected in this study. Here, the 17 items which pertain to dressing, miscellaneous physical skills, and receptive language provide the same general information as the full 112 item checklist. In this regard, the abbreviated checklist represents a substantial savings in time and effort in screening clients.

The use of this instrument is limited to the purpose for which it was designed. The abbreviated checklist should not be used as a primary

assessment tool, since it samples only a small proportion of behavior in the entire range of skills known as functional behavior. Necessarily, it must yield an incomplete description of the individual. At this time the reliability and validity of the scale have not been established and, consequently, therapists should refrain from using it as the primary instrument for diagnosing levels of retardation.

The abbreviated checklist may be considered a rough screening instrument, the use of which is to identify general types of habilitative settings and living environments within a residential setting. Since the abbreviated checklist appears to be reasonably accurate in predicting a client's general level of functioning, it may also be useful in predicting a client's success in various training programs. One study (Grosek, 1978) found that proficiency in receptive language skills correlated well with success in a toilet training program. In a similar fashion, the abbreviated checklist would be useful in identifying individuals who have a low probability of success in a basic skill training program and who would need further training in pre-requisite skills.

The above discussion suggests several trends that are to be pursued in the future. Additional administrations of the abbreviated checklist are necessary in order to establish both the reliability and the validity of the instrument. Once this is accomplished, client performance on the abbreviated checklists needs to be related to client's success in various habilitative programs, program settings, and living environments. Success and failure in these three areas must be quantified and in turn correlated with the checklist scores. When this step is completed, the checklist will serve therapists as a useful screening instrument in making treatment decisions.

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TABLE I

Average Sub-Catagory Scores for Each Level of Retardation

		Profound	Severe	Moderate	Mild
I.	Self-Help				
	a) cup	2.0	2.0	2.0	2.0
	b) feed	5.3	6.6	8.8	8.7
	c) undress	1.7	4.0	4.0	4.0
	d) dress*	0.3	1.8	3.2	4.0
	e) toilet	3.3	4.8	5.0	5.0
	f) bathe	1.7	2.6	4.0	3.6
	g) comb	0	0.2	1.0	1.0
	h) clothes	0	0	1.0	0.9
II.	Physical				
	a) stand	2.7	4.0	4.0	3.9
	b) stairs	2.0	2.8	3.0	3.0
	c) arms	5.7	4.3	7.8	7.7
	d) misc.*	1.0	2.8	5.4	6.7
III.	Language				
	a) receptive*	2.0	2.7	3.4	3.9
	b) expansion	6.3	4.3	9.6	13.7
	c) misc.	0	0	0.4	2.3
IV.	Social	2.7	5.4	9.6	10.4
V.	Economic				
	a) errands	0	0	2.2	3.3
	b) money	0	0	0.6	1.6
VI.	Occupational	0	0.2	3.0	4.7
VII.	Self-Direction				
	a) attention	1.3	0.6	2.2	2.6
	b) initiative	0	0	0.8	1.6

*At least a 15% difference between adjacent levels going in the direction from profound to mild retardation.

TABLE II

Comparing Sub-Catagory Scores to the Total Score

Subject	Dressing	Miscellaneous Physical	Receptive Language	Sub-Total[1]	Total Profile Score[2]
1	4	6	4	14	94
2	4	6	3	13	84
3	4	8	4	16	105
4	4	8	4	16	104
5	4	4	4	12	87
6	4	8	4	16	82
7	4	7	4	15	106
8	4	4	4	12	79
9	3	5	3	11	88
10	3	5	3	11	78
11	3	7	3	13	79
12	3	6	4	13	82
13	2	4	3	9	49
14	2	4	2	8	63
15	2	2	3	7	45
16	2	1	2	5	49
17	1	3	3	7	53
18	0	0	2	2	31
19	1	2	2	5	42
20	0	1	2	3	41

1 = X score
2 = Y score

rxy = .94

Table III

Comparing Estimated and Actual Total Scores

Subject	Estimated Total Score[1]	Actual Total Score[2]
1	23	15
2	33	17
3	18	20
4	28	27
5	43	40
6	53	42
7	53	50
8	78	51
9	38	51
10	63	54
11	53	56
12	48	60
13	78	71
14	53	71
15	63	71
16	83	75
17	63	78
18	78	78
19	58	81
20	88	84
21	88	91
22	93	92
23	98	98
24	103	107

1 = x score
2 = y score

rxy = .90

TABLE IV

Distribution of Subjects According to Checklist Scores

	Checklist Scores	
	Predicted	Actual
Level of Retardation		
Profound	15	12
Severe	4	8
Moderate	4	3
Mild	1	1

Chi Square = 4.85 N.S.

APPENDIX I

Broome Functional Behavior Checklist Abbreviated Form

Note if the behavior is present (+) or absent(0).

I. Dressing

____a. puts on socks or underpants or dress
____b. dresses self except for zippers/buttons
____c. dresses self completely
____d. ties shoe laces

II. Physical Skills

____a. runs
____b. jumps
____c. balances on one foot for 5 seconds
____d. hops or skips
____e. rides bike
____f. climbs tree or jungle jim
____g. dances
____h. uses skate or sled or jump rope
____i. goes about local town without assistance

III. Receptive Language

____a. responds to gestures
____b. performs simple commands
____c. understands directions and instructions
____d. understands complex communication using "because," "but"